## Phytobiotic health additive improves shrimp farm operation harvest results and sustainability

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## **ABSTRACT:**

For the past 20 years, one of the key strategies of the world aquaculture industry has been to reduce use of fish meal and fish oil in feed formulations, to improve its sustainability. The growing world conscience and concern with climate change means that many industries, including aquaculture, are embarking in Life Cycle Analysis of their products and services, which consumers and seafood importers in developed countries are increasingly demanding. Shrimp farming still faces the major challenge to overcome widespread and severely damaging diseases that threaten sustainability of farm operations. This study follows the successful application of a phytobiotic health additive, in significantly improving survival, harvest performance, and profitability of a large Indonesian farm. A Life Cycle Analysis was conducted on these results, proving how improved survival and performance also mitigated the shrimp farm contribution to Green House Gases and other environmental impact parameters.

## **KEYWORDS:**

shrimp farming, diseases, white feces syndrome, Life Cycle Analysis (LCA), sustainability, phytobiotic